

IN THE CLAIMS:

1. (Currently Amended) An optical system (~~10, 40~~) for observing multiple objects (~~33, 34, 61, 63~~) situated distal from one another, the optical system comprising: having

a camera unit (~~11, 42~~) comprising a first prism unit (~~13, 43~~) and two object prism units, said first prism unit being ~~which is~~ situated one or more of on [[the]] an optical axis (~~12, 41~~) ~~and/or and~~ in [[the]] a beam path (~~15, 47~~) of [[the]] said camera unit~~[[,]]~~ for producing two partial beam paths (~~18, 19, 48, 49~~), ~~as well as two object prism units (20, 21, 51, 52), each of which is~~ said two object prism units being situated in a partial beam path and assigned to an object, wherein an illumination unit is assigned to each of said two object prism units to form a plurality of illumination units, said illumination units being implemented as light-emitting semiconductor components.

2 -3. (Canceled)

4. (Currently Amended) The optical system according to [[Claim]] claim 1 ~~[[3]]~~, ~~characterized in that the~~ wherein said illumination units are implemented as light-emitting diodes.

5 - 9. (Canceled)

10. (Currently Amended) The optical system according to claim 1, ~~characterized in~~

~~that the~~ wherein said output beam paths ~~(48,49)~~ of the object prism units ~~(51, 52)~~ run extend transversely and in ~~[[the]]~~ an opposite direction to the optical axis ~~[[41]]~~ of the camera unit ~~[[42]]~~.

11. (Currently Amended) The optical system according to ~~[[Claim]]~~ claim 10, ~~characterized in that~~ wherein the illumination beam paths ~~(59,60)~~ implemented between the object prism units ~~(51, 52)~~ and the illumination units ~~(57, 58)~~ run extend parallel to the optical axis ~~[[41]]~~ of the camera unit ~~[[42]]~~.

12. (Currently Amended) The optical system according to ~~[[Claim]]~~ claim 11, ~~characterized in that~~ wherein the prism unit ~~[[43]]~~ has a first optical boundary face ~~[[45]]~~, which on the optical axis ~~[[41]]~~ of the camera unit ~~[[42]]~~ reflects a first partial beam path ~~[[48]]~~ in ~~[[the]]~~ a direction of the first object ~~[[61]]~~ and is transparent to a second beam path ~~[[49]]~~, and which is angled by 45° to the optical axis, a second optical boundary face ~~[[50]]~~ situated perpendicular to the optical axis being positioned downstream from said first optical boundary face for reflecting the second partial beam path toward the first optical boundary face and reflecting the second partial beam path in the direction of the second object ~~[[63]]~~.

13. (New) An optical system, comprising:

a first object comprising a first terminal surface;

a second object comprising a second terminal surface, said first object being arranged

at a spaced location from said second object;

a camera unit generating a beam of energy;

a camera beam splitting prism unit;

a first object prism unit;

5 a second object prism unit;

a first light emitting diode element arranged opposite said first object prism unit, said first light emitting diode element generating a first light emitting diode illumination beam;

a second light emitting diode element arranged opposite said second object prism unit, said second light emitting diode element generating a second light emitting diode illumination beam, said camera beam splitting prism unit being arranged one or more of on an optical axis of said camera unit and in said beam of energy of said camera unit, said camera beam splitting prism unit receiving said beam of energy from said camera unit such that said camera beam splitting prism unit produces an upward partial beam path and a downward partial beam path, said upward partial beam path extending in a direction of said first terminal surface, said downward partial beam path extending a direction of said second terminal surface, said first object prism unit being arranged in said upward partial beam path, wherein said first object prism unit is transparent to said upward partial beam path, said second object prism unit being arranged in said downward partial beam path, wherein said second object prism unit is transparent to said downward partial beam path, said first object prism unit receiving said first light emitting diode illumination beam such that said first light emitting diode illumination beam is reflected in an upward direction toward said first terminal surface, said second object

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prism unit receiving said second light emitting diode illumination beam such that said second light emitting diode illumination beam is reflected in a downward direction toward said second terminal surface.

14. (New) An optical system in accordance with claim 13, wherein said first terminal surface is arranged opposite said second terminal surface, said first light emitting diode element and said second light emitting diode element being arranged between said first object and said second object.

15. (New) An optical system in accordance with claim 14, wherein said first light emitting diode element is arranged on one side of said camera unit, said second light emitting diode element is arranged on another side of said camera unit.

16. (New) An optical system in accordance with claim 15, wherein said camera beam splitting unit is arranged between said first object prism unit and said second object prism unit.

17. (New) An optical system in accordance with claim 16, wherein said upward direction is opposite said downward direction.

18. (New) An optical system, comprising:

a first substrate comprising a first terminal surface;

a second substrate comprising a second terminal surface, said first substrate being located at a spaced location from said second substrate;

a camera unit generating a beam of light;

a camera beam splitting prism unit;

5 a first object prism unit;

a second object prism unit;

a first light emitting diode element arranged opposite said first object prism unit, said first light emitting diode element generating a first light emitting diode illumination beam;

10 a second light emitting diode element arranged opposite said second object prism unit, said second light emitting diode element generating a second light emitting diode illumination beam, said camera beam splitting prism unit being arranged one or more of on an optical axis of said camera unit and in a path of said beam of light, said camera beam splitting prism unit receiving said beam of light from said camera unit such that said camera beam splitting prism unit splits said beam of light into a first beam of light and a second beam of light, said first  
15 beam of light extending in an upward direction toward said first terminal surface, said second beam of light extending in a downward direction to said second terminal surface, said first object prism unit receiving said first beam of light from said camera beam splitting prism unit such that said first beam of light passes through said first object prism unit to said first terminal surface to define a first light beam path, said second object prism unit receiving said second  
20 beam of light from said camera beam splitting prism unit such that said second beam of light passes through said second object prism unit to said second terminal surface to define a second

light beam path, said first object prism unit receiving said first light emitting diode illumination beam such that said first light emitting diode illumination beam is reflected along at least a portion of said first light beam path in said upward direction toward said first terminal surface, said second object prism unit receiving said second light emitting diode illumination beam such that said second light emitting diode illumination beam is reflected along at least a portion of said second light beam path in said downward direction toward said second terminal surface.

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19. (New) An optical system in accordance with claim 18, wherein said first terminal surface is arranged opposite said second terminal surface, said first light emitting diode element and said second light emitting diode element being arranged between said first substrate and said second substrate.

20. (New) An optical system in accordance with claim 19, wherein said first light emitting diode element is arranged on one side of said camera unit, said second light emitting diode element is arranged on another side of said camera unit.

21. (New) An optical system in accordance with claim 20, wherein said camera beam splitting unit is arranged between said first object prism unit and said second object prism unit.

22. (New) An optical system in accordance with claim 21, wherein said upward direction is opposite said downward direction.